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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,080	03/05/2002	William J. Hunt	57080US002	6723
32692	7590	08/20/2004	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			UHLIR, NIKOLAS J	
			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,080

Applicant(s)

HUNT ET AL.

Examiner

Nikolas J. Uhler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to applicants arguments dated 7/22/2004. Currently, claims 1-19 are pending.

Previous Grounds of Rejection

2. The rejection of claims 1-10, and 13-16 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over in view of Bruxvoort et al. (US5958794) **is withdrawn in view of the applicants arguments,**

3. The rejection of claims 11-12 under 35 U.S.C. 103(a) as being unpatentable over Bruxvoort **is maintained** as set forth in the previous office action dated 8/27/2003.

4. The rejection of claims 17-18 under 35 U.S.C. 103(a) as being unpatentable over Bruxvoort in view of Chen et al. (US6048677) **is maintained** as set forth in the prior office action dated 03/22/04.

5. The rejection of claims 1-4, and 7-19 under 35 U.S.C. 103(a) as being unpatentable over Bruxvoort et al. (US5958794) in view of Kamikubo et al. (US5698618) **is maintained** as set forth in the prior office action dated 03/22/04.

6. The rejection of claims 5-6 under 35 U.S.C. 103(a) as being unpatentable over Bruxvoort further in view of Suzuki (US5998091) **is maintained** as set forth in the prior office action dated 03/22/2004.

Response to Arguments

7. Applicant's arguments filed 07/22/2004 have been fully considered but are not persuasive. Applicant's arguments with respect to the dispensant being

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contained in the final product of the instant claims is persuasive in view of the knowledge in the art that coatings derived from surfactant containing slurries contain the surfactant in the slurry. Accordingly, the previous 102(b) rejection has been withdrawn. With respect to the rejection of the instant claims as obvious under 35 U.S.C 103(a), applicants presented the following arguments:

I. Regarding the rejection of claims 17-18 as unpatentable over Bruxvort in view of Chen, the examiner has provided no motivation to place the dispersant taught by Chen in the dispersion taught by Bruxvort. Bruxvort makes no mention that any different dispersion would be beneficial. Therefore the examiner has not met the initial burden to show a *prima facie* case of obviousness with respect to these claims.

II. Regarding the new rejection of claims 1-4 and 7-19 as unpatentable over Bruxvort in view of Kamikubo and the rejection of claims 5-6 as unpatentable over Bruxvort in view of Suzuki. There is no teaching in Bruxvort that would motivate one of ordinary skill in the art to find a new dispersant other than those already disclosed. At most, Bruxvort makes new dispersants obvious to try, but not obvious under 35 U.S.C 103(a).

8. Regarding argument I. First, this argument attacks Bruxvort alone.

Specifically, applicant argues that "nothing in Bruxvort would motivate one to use the dispersant claimed in the present application." However, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

9. Further, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally

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available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, there is clear motivation to make the proposed modification. Specifically, Bruxvort teaches an abrasive coating that comprises a binder (which can be a melamine or acrylic resin), abrasive particles (which can be diamond, titanium oxide, or iron oxide), and optionally a surfactant (equivalent to a dispersant). The surfactant "may be cationic, anionic, amphoteric, or nonionic *so long as the surfactant is compatible with both the abrasive particle and the binder precursor*" (column 21, lines 1-4) (emphasis added).

10. Bearing this teaching and the type of binder and particles utilized by Bruxvort in mind, Chen teaches a coating composition comprising particles, a binder, and a dispersing agent/surfactant. The binder can be an acrylate, which, as noted above, is the same type of binder used in Bruxvort. The particles can be diamond or an oxide of iron and/or titanium. These particles are the same types of particles utilized in Bruxvort. The dispersant can be selected from a wide variety of conventional dispersants (including those of the type disclosed by Bruxvort), and can be a commercially available dispersant such as Solsperse 24000. The dispersant is specifically taught to improve the dispersability of these particles in an acrylate binder. Thus, given that Solsperse 24000 is specifically taught to improve the dispersability of particles that are of the same type as that utilized by Bruxvort in the same type of binder utilized by Bruxvort, the examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Solsperse 24000 as taught by Chen as the

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dispersant in Bruxvort. One would be especially motivated by this fact, given that Bruxvort essentially states that the surfactant can be any type of surfactant, so long as it is compatible with the binder precursor and the abrasive particles, and Chen clearly establishes that Solsperse 24000 is compatible with both the same type of binder and the same type of particles utilized in Bruxvort, and improves dispersability.

11. Argument II is essentially the same as argument I, except that it is drawn towards different combinations of references, namely Bruxvort with Suzuki and Bruxvort with Kamikubo. The examiner maintains these rejections for essentially the same reasons as set forth above for the combination of Bruxvort with Chen.

12. Specifically, regarding the combination of Bruxvort with Suzuki, Suzuki teaches dispersants that are suitably used to improve the dispersability of particles that are similar/identical to those used in Bruxvort in binders that are similar/identical to those disclosed in Bruxvort. Solsperse 24000, EFKA 4400 and other amine containing dispersants are noted. The examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the dispersants taught by Suzuki in the coating composition of Bruxvort in view of the fact that the dispersants taught by Suzuki are specifically shown to be compatible with the binder and particles utilized in Bruxvort and improve dispersability.

13. Regarding the combination of Bruxvort with Kamikubo, the examiner maintains this rejection for essentially the same reasons as set forth above for the combination of Bruxvort with either Chen or Suzuki. Specifically, Bruxvort

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requires a dispersant to be compatible with the binder and particles used in the invention. The binder can be an acrylate and the particles can be diamond, titania or iron oxide. Bearing this in mind, Kamikubo teaches dispersants that are suitable for improving the dispersability of pigments (such as titanium oxide or iron oxide) in binder (such as an acrylate). Suitable dispersants include commercially available dispersants (such Solspers 24000) or dispersants having specific molecular weights and amine values. The examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the surfactants taught by Kamikubo in the coating composition of Bruxvort in view of the fact that the dispersants taught by Kamikubo are specifically shown to be compatible with the binder and particles utilized in Bruxvort and improve dispersability.

14. Accordingly, all of applicant's arguments against the prior applied 103(a) rejections are found to be unpersuasive for the reasons set forth above.

Conclusion

15. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

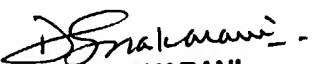
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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhler whose telephone number is 571-272-1517. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


D. S. NAKARANI
PRIMARY EXAMINER

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